both gave good catches. The pie-dish trap was used in Florida. A paper ice cream carton trap with a screen cone was used in Idaho, Oregon, and Washington.

Our observations suggest that an effective attractant might be found for such economically important chloropids as the species of *Hippelates* commonly referred to as eye gnats and for the frit fly, *Oscinella frit* (L.). Since specimens not commonly collected were found in the samples, the study also suggests that many synthetic attractants now being studied might be employed by taxonomists as a means of collecting material of interest.

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OVATUS RETICULATUS, A NEW SPECIES OF APHID FROM OXALIS IN NORTH CAROLINA

(Homoptera: Aphididae)[1]

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ABSTRACT—The apterous viviparous female, the oviparous female, and the brachypterous male of *Ovatus* **reticulatus**, n. sp. are described. The new species, which is related to *Ovatus phloxae* (Sampson, 1939), but much darker, lives on *Oxalis ?stricta* in the mountains of North Carolina, being holocyclic and not host alternating.

The following description of a new North American aphid species is based on a sample consisting of apterous viviparous females and sexuales collected by me in North Carolina in 1961. I realized that it belonged to an undescribed species, but hesitated to describe it. This

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could better be done by some one having better opportunities than I to study the species in nature. But, after ten years, this has not happened, and therefore I describe the species, hoping that the description may give rise to further finds and augmented knowledge of its ecology.

Ovatus reticulatus, n. sp.

Apterous viviparous female:

Body broadly oval. Tergum sclerotic, with a heavily pigmented shield from mesonotum to VIth abd. tergite, including the marginal parts; VIIth abd. tergite free, sclerotic; VIIIth abd. tergite with transverse, dark bar; a small pale area in front of each siphunculus (fig. 1 B). Pigmented area with very conspicuous polygonal reticulation, not, except on VIIth and VIIIth tergites, formed by rows of spinules but by black lines or rather ridges (visible as such in the margins). A similar, but less distinct kind of reticulation in the non-pigmented cuticle of thorax and abdomen. Pleural and marginal intersegmental muscular sclerites occur in the pigmented area, with rather small, subcircular, hexagonal cells. Body hairs few in number, very short, blunt; VIIIth abd. tergite with 4–6 hairs; length of dorsal body hairs about ⅛ of the basal diameter of IIIrd antennal segment. Small, flat marginal tubercles irregularly present on tergites II–V. Head and Ist and IInd antennal segments very dark, scabrous, partly imbricated or scaly (fig. 1 A). Frons concave, with well developed lateral tubercles, the inner margins of these almost parallel, but diverging a little. Antenna 6-segmented, markedly imbricated, a little shorter than body; IIIrd segment pale, like IVth segment with faintly brownish apex, Vth segment with dark apex, VIth segment all very dark; secondary rhinaria absent; processus terminalis 4.3–4.8 × length of basal part of VIth segment, 1.3–1.5 × length of IIIrd segment; IVth and Vth segments of about equal length; longest hair on IIIrd antennal segment only about ¼ of basal diameter of that segment. Rostrum reaching a little past 2nd coxae; apical segment shorter than 2nd segment of hind tarsi, with 4 short accessory hairs (one or two may be missing) (fig. 1 F). Legs pale, with faintly darker apices of tibiae and quite dark tarsi; femora distally and ventrally somewhat imbricated; tibiae without small spines besides the normal hairs in adults and nymphs; first tarsal segments with 3–3–2 hairs; 2nd segment of hind tarsi about as long as basal part of VIth antennal segment. Siphunculi about ⅕ body's length, about 2¼ × length of cauda, uniformly dark, evenly imbricated, rather slender, but broad at base; the basal half tapering, the distal fourth or fifth a little swollen, slightly constricted below the small, but conspicuous flange. Cauda elongated triangular, rather acute, dark, with 4–8 hairs.

Color while alive shining black. Larvae not shiny.

Body length about 1.67–1.83 mm.

Measurements of holotype in mm: Body 1.80; antenna 1.77, antennal segments: I 0.10, II 0.09, III 0.38, IV 0.30, V 0.27, VIa 0.12, VIb 0.51; siphunculus 0.36, cauda 0.16, apical segment of rostrum 0.09, 2nd segment of hind tarsi 0.11.

Oviparous female (one specimen):

The sclerotic, distinctly reticulated area from mesonotum to VIth abd. tergite rather pale; VIIth and VIIIth tergites with dark bars. Siphunculi rather thick towards apex, narrowly hour-glass-shaped, hardly twice as long as cauda. Proximal

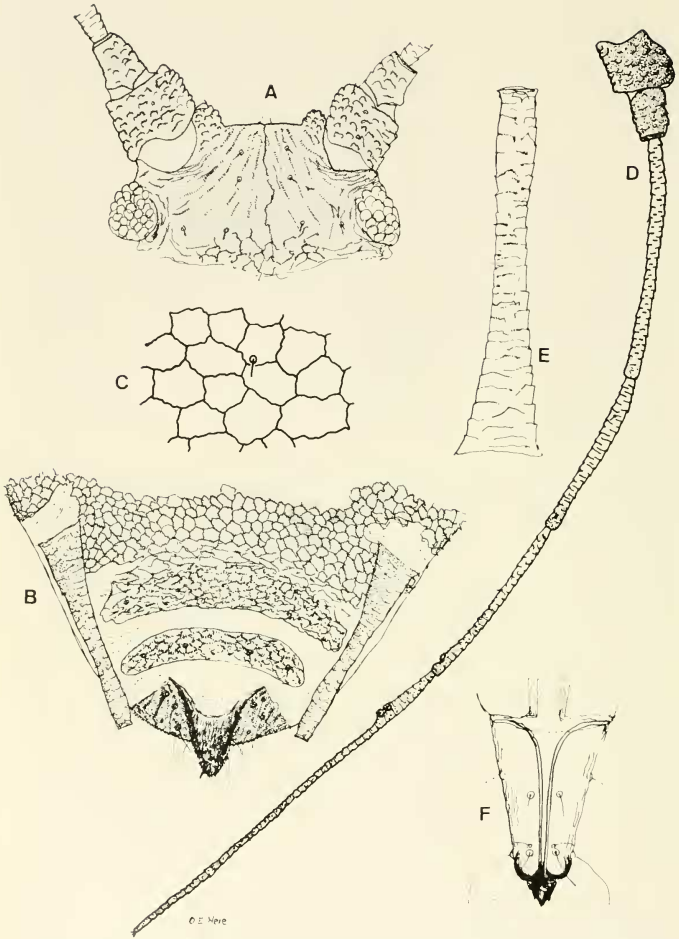

Fig. 1. *Ovatus reticulatus*, n. sp., apterous viviparous female: A, head in dorsal view (100×); B, posterior part of body (100×); C, reticulation pattern of tergum in high magnification; D, antenna (100×); E, siphunculus (145×); F, apical segment of rostrum (270×).

half of hind tibiae swollen, diameter about 2 × diameter of distal part, with about 30 pseudosensoria. Otherwise like apterous viviparous female.

Color unknown, probably black.

Measurements in mm: Body 1.64; antenna 1.46, antennal segments: I 0.09, II 0.07, III 0.29, IV 0.23, V 0.23, VIa 0.10, VIb 0.45; siphunculus 0.29, cauda 0.15, apical segment of rostrum 0.09, 2nd segment of hind tarsi 0.11.

Alate male (one specimen):

Brachypterous, wings useless, venation indistinct. Antennae and legs darker than in apterous viviparous female. Abdomen with marginal sclerites and spinal bars, both with very distinct reticulation, dark spots at the spiracles and intersegmental muscular sclerites in pleural and marginal positions. Antennae 6-segmented, longer than body; IIIrd segment with 8–11 extremely small, irregularly arranged rhinaria, IVth segment with 7, Vth segment without secondary rhinaria. Siphunculi almost cylindrical, thinnest in the middle, rather short, only about 0.15 of body's length, hardly twice as long as cauda. Cauda short, triangular, with 9 hairs.

Color unknown.

Measurements in mm: Body 1.30; antenna 1.49, antennal segments: I 0.08, II 0.06, III 0.32, IV 0.22, V 0.24, VIa 0.08, VIb 0.49; siphunculus 0.19, cauda 0.10; rudiments of fore wing 0.64, hind wing 0.30.

Types:

Holotype: One apterous viviparous female (no. 2192 b 1) in the collection of the U. S. Nat. Mus. Nat. Hist. in Washington.

Paratypes: 1 brachypterous male in the U. S. Nat. Mus., 3 apterous viviparous females in Dr. D. Hille Ris Lambers' collection in Bennekom, Netherlands, 2 apterous viviparous females in Dr. C. F. Smith's collection in Raleigh, North Carolina, and 1 apterous viviparous female and 1 oviparous female in the author's collection in Skive, Denmark.

Type locality: Pleasant Gardens, Marion, North Carolina, U.S.A.

Biology:

The aphids were collected Oct. 13, 1961, in the mountainous area of western North Carolina in a garden that extended from a valley onto a slope overgrown with forest trees and scrub. The aphids were on the undersides of curved leaves of an *Oxalis* sp. with yellow flowers. Later herbarium material of the plant was identified by Dr. J. Hardin as *Oxalis ?stricta*, a species native to North America.

The presence of sexuales shows that the species is holocyclic and not host alternating.

Taxonomy:

The genus *Ovatus* van der Goot is related to *Myzus* Passerini. Both genera have well developed, converging, scabrous frontal tubercles,

lack secondary rhinaria on the antennae of apterous females, have mostly short hairs on the body and appendages, and have subcylindrical to slightly swollen siphunculi. *Ovatus* differs from *Myzus* s. lat. in lacking the abdominal sclerotization typical for alatae of *Myzus* and in having a more or less distinct reticulation pattern on dorsum of apterae. It differs from *Myzus* s. str. in the absence of spinules between the dorso-apical hairs on the hind tibiae in nymphs. And *Ovatus* differs from *Nectarosiphon* Schouteden in the differences from *Myzus* s. lat. and also in having less swollen siphunculi in summer and autumn generations.

O. reticulatus, n. sp. has several characters in common with *O. phloxae* (Sampson, 1939), which was described as a *Phorodon* but was placed in *Ovatus* by Hille Ris Lambers (1966: 600); e.g. reticulated tergum (particularly distinct behind bases of siphunculi), extremely short hairs on body and antennae, and the same shape of siphunculus, but *O. phloxae* is much paler, and its frontal tubercles are more prominent and converge more strongly.

In *Myzus leucocrini* Gillette and Palmer, according to the description in Gillette and Palmer (1929: 470–471), old apterous females are almost black, are reticulated on the dorsum, and the shape of the frons and siphunculi is nearly the same as in *Ovatus reticulatus*, n. sp. It is also described by Mason (1940: 11) and Palmer (1952: 338). I have not seen *M. leucocrini* myself. It differs from *O. reticulatus* in that the processus terminalis is only about 3 times as long as the basal part of the ultimate antennal segment, and the cauda is more elongate, slightly constricted, and bears 10 hairs.

Acknowledgments

I wish to thank Dr. D. Hille Ris Lambers for drawing my attention to the similarity between *O. reticulatus*, n. sp. and *O. phloxae*, for lending me slides of *O. phloxae* for comparison, and for critical remarks, Miss Louise M. Russell for correcting the language and proof-reading, and Dr. J. W. Hardin of North Carolina State University for the identification of the host plant.

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